* K C - 6 1 4 5 *

KC-6145

B. E. - II (Sem. III) (Civil) Examination

November / December – 2012

Transportation Engg. - I

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. E. - 2 (SEM. 3) (CIVIL)

Name of the Subject :

☛ TRANSPORTATION ENGG. - 1

☛ Subject Code No. : 6 1 4 5 ☛ Section No. (1, 2,.....) : NIL

Seat No. :

Student's Signature

(2) Attempt all the questions.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if required.

1 (a) Discuss about characteristics of various modes of transportation. **18**

(b) Discuss about history of road transportation.

(c) What are the functions of sleeper ? What are the advantages and disadvantages of wooden sleeper ?

OR

(c) Discuss about problems due to change of gauge.

2 (a) Discuss about scope of water transportation along with their advantages and limitations. **6**

(b) Explain types of surveyes carried out for airport planning. **5**

OR

(b) Write full form of the following:
(i) IRCON
(ii) CONCOR
(iii) IAAI
(iv) ICAO
(v) ATCS

(c) What are the causes and effects of creep of rail? How it can be controlled ? **7**

3 (a) Discuss about buoyancy and stability for ship and aircraft. **6**

(b) What is dolphin and tender? Discuss about their functions with sketch. **6**

OR

(b) Discuss about various components of a port. **6**

(c) Write about Indian railways. **5**

4 (a) Discuss effect of resistance on transportation system. **15**

OR

(a) What are the types of gauge? Which type of gauge is suitable for hilly areas and why?

(b) What is sleeper density and sleeper spacing? Find out number of sleepers required for a 1 km long railway track construction.

(c) Discuss about ranway and taxiway.

5 (a) Enlist major ports of India. What are the uses of wet dock and dry dock? **5**

(b) Calculate the actual length of the runway from the following data : **6**

(i) Airport elevation above M.S.L. R.L. = 210 m

(ii) Airport reference temp. = 29°C

(iii) Basic length of runway = 1200 m

(iv) Effective gradient = 0.30%

OR

(b) Draw a typical cross section of a double line railway track on embankment on straight track. **6**

(c) Discuss about effect of tides and wind on marine structures. **6**

6 Attempt any **three** : **15**

(i) Coning of wheels

(ii) Belt conveyor system

(iii) Pipeline transportation

(iv) Aircraft parking

(v) Runway orientation

(vi) Wharf and Jetty.
